



Après le déluge

Mumbai's flood shows the need to improve infrastructure and protocols in urban centres

The return of the deluge to Mumbai and the paralysis suffered by the city bring up the question of why Indian cities are unable to improve their resilience to extreme weather events. As the nucleus of financial activity, Mumbai's losses naturally have national implications. The flooding reduced trading volumes in the stock market, and thousands had to stay on in their offices after the workday. All this brings back memories of the disaster of 2005 caused by over 99 cm of rainfall in a 24-hour period leaving hundreds dead. There has been distressing loss of life this time too, but on a lower scale. Beyond the political wrangling on bad management, such extreme weather events trigger valuable research and analysis on developing better prediction and management systems. Researchers at the Indian Institute of Technology in Mumbai have, for instance, provided pathways for nearly 450 sq. km of the city to better prepare for monsoonal floods, using the worst-case scenario of a dozen years ago as the baseline. There should naturally be an inquiry into whether the reforms proposed over time, ranging from clearing of drainage channels and removal of encroachments to the creation of holding ponds to temporarily store large volumes of water, gained any traction. Over time, mangrove wetlands in the eastern fringes and drain paths in the north-west of the city have lost much of their capacity owing to unplanned development. The latest downpour underlines why loss of urban wetlands should be halted and compensatory lakes created.

Learnings from Mumbai are important for other cities as well, to prepare for a future in which scientists think there will be more days of short but intense rain spells. Numerical weather prediction has consistently improved. Researchers from IIT Gandhinagar published a forecast on social media warning of 100 mm-plus rainfall for the region on August 29, four days ahead. These remarkably accurate models open up possibilities for authorities to evacuate vulnerable sections early, residents to stock up on essential supplies and disaster management authorities to review options. Indian cities are poorly planned and managed, exposing them to cyclical weather havoc; it is imperative that civic bodies produce flood risk maps and restrict development in the areas. Given that monsoon flooding is inescapable, citizens and communities need to prepare. Putting new constructions on stilts, retrofitting houses to locate electrical installations high above, and creating a first response protocol are all important. Introduction of insurance cover for householder losses will provide financial protection and, crucially, require city administrations to provide professional management. If there is a single priority that every city needs, it is to reopen the veins of natural drainage that have been callously built over. Mumbai this year and Chennai's disastrous flood of 2015 underscore that lesson.

Pragmatic in London

The government and main opposition in the U.K. are finally coming around to a soft Brexit

The Labour Party's surprise announcement that Britain should continue in the European single market, at least for some time after the March 2019 Brexit deadline, reflects the late dawning of realism over disengaging with the European Union. It implies an acceptance of the principle of free movement of people from the bloc, a contentious issue that had alienated the opposition party's core support base during the 2016 referendum. Equally significant is the ruling Conservative Party's sudden acceptance of the possibility that the European Court of Justice may still have a role after Britain's exit from the EU. Independence from the jurisdiction of the Luxembourg court had all along been equated with the assertion of national sovereignty by the Leave campaign. This hard line was also the centrepiece of Prime Minister Theresa May's Lancaster House address in January. Foreign Secretary Boris Johnson, a staunch Brexiter, has also made a striking departure. Last month he made news with his "go whistle" comment to European leaders over London's outstanding dues, but has since said that as a law-abiding country Britain would indeed pay its bills. There are thus good chances that Eurosceptics in both the parties will be further isolated within and outside Parliament, allowing divisions between the U.K. and EU negotiating positions to be narrowed. The bottomline for Brussels is to ensure that Britain's exit does not set a precedent. A necessary implication of this premise is that the terms of a future partnership would be vastly inferior in comparison with the benefits of full membership. Conversely for Britain, to conform to a set of rules and regulations without a real voice in their formulation would be far from an ideal arrangement.

This late pragmatism does not detract from the contentious round of negotiations between the U.K. and the rest of the bloc. Brussels has, ever since the June 2016 referendum, insisted upon adherence to a sequential process of unwinding the long partnership. The withdrawal agreement deduced from Article 50 of the Treaty on European Union entails three distinct elements. It includes a decision on the status of British and EU migrants resident in their respective territories, the financial settlement of €60-100 billion, and reconfiguration of the border between Northern Ireland and the Republic of Ireland. Any meaningful negotiations on a future trade agreement between the two parties hinges on a resolution of these outstanding issues. Little progress has been achieved so far on many of these critical matters. The European Commission and some EU member-states have expressed concern that London is not doing enough to hasten the process. The emerging shifts in the U.K.'s negotiating stance *vis-a-vis* the EU should be read against this overall backdrop.

BRICS off the wall

How India and China repair ties at the Xiamen summit will determine the future of BRICS itself



SUHASINI HAIDAR

At Copenhagen in 2009, Prime Minister Manmohan Singh, then Chinese Premier Wen Jiabao and other leaders of the newly formed BASIC group (with Brazil and South Africa) were sitting in a conference room, negotiating a statement on the failure of the climate change summit. The group of emerging economies had been bolstered by the formation of the BRIC group (Brazil, Russia, India and China, South Africa joined in 2010) with a declared objective of battling "Western hegemony". The BASIC group had decided they would walk away from Copenhagen without a deal, unless the demands of emerging economies, which couldn't afford the same emission cuts, were reflected. The scene, as described by Shyam Saran (then India's chief climate negotiator) in a new book on Indian foreign policy, turned dramatic: with a knock on the conference room door, the U.S. team, led by then President Barack Obama and then Secretary of State Hillary Clinton, barged into the meeting. After much back and forth, Mr. Wen and Dr. Singh accepted an American compromise on the wording of the drafts, and the Copenhagen accord went ahead.

The power of five

The event didn't just change the course of international negotiations on global warming at the time, it heralded the arrival of emerging economies as a political force, and particularly the potential of the combined political clout of India and China. BRICS (BASIC was later disbanded) went from a modest 16-paragraph joint statement at Yekaterinburg in June

2009 to the more substantive 110 paragraphs that the five countries agreed upon in the Goa Declaration of October 2016, developing common positions not just on climate change but also on terrorism, energy, and world politics.

Over time, it no longer met with sneers and references, like being called the "Bloody Ridiculous Investment Concept" by one investment banker, or the group of "paper tigers", a reference to the fact that the term BRIC was coined in a paper by Goldman Sachs chief economist Jim O'Neill in 2001. The valuation of the BRICS grouping, that represents 40% of the world's population and a quarter of its growth at \$17 trillion, also did well, with more and more investment being driven into the five economies, mainly led by India and China. Not only did the BRICS countries better their positions in the World Bank and International Monetary Fund, they also struck a small blow against Bretton Woods institutions, and the BRICS New Development Bank set up in 2015 has already given out about \$6 billion in loans for 23 projects across BRICS countries. This is no mean feat given the vast differences in size and political systems, and internal turmoil in BRICS countries.

From Doklam to Xiamen

Despite all of these gains, the truth is that BRICS now faces its most challenging summit, not because of the West or the developed world, but because of growing differences between its two biggest members, India and China. And as Prime Minister Narendra Modi prepares to travel to Xiamen for the September 3-5 summit, it is important to see how the bilateral relationship and several other changes in geopolitics are now going to change the course of the BRICS engagement as well.

The Xiamen summit follows a gruelling two and a half months during which the rhetoric between India and China — especially the



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latter's — has been quite sharp. While diplomats smoothed out a victory over more hawkish elements by disengaging the troops at Doklam and obtaining a Chinese assurance that it would not continue its road construction at the tri-junction area, more heavy lifting will have to be done to restore the situation to pre-June terms. The bilateral tensions will no doubt spill over to the multilateral negotiations at Xiamen, especially given the negative atmosphere built up by state-run Chinese media these past few weeks.

Beyond the bilateral issues over the boundary, Nuclear Suppliers Group membership for India, terrorism, the Dalai Lama and others, the rift over China's Belt and Road Initiative (BRI) is also likely to dominate discussions at BRICS, as it now underpins all of China's other policies. India's refusal to be a part of the BRI over sovereignty issues, coupled with its broader objections to the transparency and agenda of the project, was a cause for tensions before the Doklam stand-off, with some commentators even arguing that it precipitated the crisis. There is little doubt that China will aim to bring the BRI on the table for negotiations at BRICS, to win a statement of endorsement as it did at the Shanghai Cooperation Organisation last year. India will have to use considerable leverage with other mem-

bers to ensure that its concerns prevail. However, it must be remembered that Russia and South Africa are important parts of BRI, and while Brazil is not, it is no less a recipient of Chinese investment, with a \$20 billion Brazil-China infrastructure fund inaugurated this May.

Multiple challenges

Another challenge for India is likely to arise from China's plan for a "BRICS-Plus" or "Friends of BRICS" grouping, with Foreign Minister Wang Yi's plan to include Pakistan, Sri Lanka and Mexico to an expanded version of BRICS. The suggestion of including Pakistan is something India has balked at and won't pass quite yet, but it wouldn't want to be seen to be opposing China's rationale of promoting "south-south cooperation" further.

Meanwhile Russia, which was the prime mover for the grouping, has moved closer to China and away from India; this could affect the language of the joint statement, especially on issues like Afghanistan, on which BRICS members had previously been on the same page. Russia's estrangement from the U.S. and Europe post-2014 and the Ukraine crisis in particular have increased its dependence on its east and south, mainly in the direction of the \$300 billion Russia-China oil pipeline that China is

funding. Russia's shift on dealing with the Taliban is a strong signal of which way it is headed.

The U.S.'s new Afghanistan-Pakistan-India policy, that builds India's economic assistance into its own strategy for Afghanistan, will crystallise battle lines in the latest round of this age-old battle, with Russia, China, Iran and Pakistan ranged on one side, and India, the U.S. and NATO allies now on the other. In keeping with this, Russian Foreign Minister Sergey Lavrov has called the U.S.'s Afghanistan policy a "futile course", while President Vladimir Putin's Afghanistan envoy Zamir Kabulov has warned against "putting too much pressure" on Pakistan. At both the BRICS conference in Goa last October, as well as the Heart of Asia summit in December, Russian officials cavilled at backing India's strong language on terrorism emanating from Pakistan.

The road ahead

Nevertheless, it is an indicator of the importance of BRICS that both Mr. Modi and Chinese President Xi Jinping appeared to have exerted enough pressure on officials to bring about the disengagement in Doklam a week before the summit at Xiamen. The Modi government must be credited for ensuring that it won peace at Doklam without building the outcome up as a defeat of China, which would have made their rivalry at BRICS that much more intense. In this, BRICS has fared better than two other groupings, SAARC and the Non-Aligned Movement, whose last summits India skipped, and appears to have abandoned. It remains to be seen how the two leaders use next week's bilateral encounter to chart a road map to repair ties. This could provide a realistic understanding of where the road ahead leads for BRICS as well, and whether post-Xiamen it can still bear out the potential that was promised a decade ago in Yekaterinburg and Copenhagen.

Powering aspirational India

Much more investment is needed to increase the use of low-carbon energy sources



R.B. GROVER

How much electricity is needed by India? To answer this, one approach is to follow a top-down econometric model whereby one examines growth in the economy, looks at the relationship between economic growth and energy requirements, and incorporates influence of technological and policy changes exogenously. The alternative is a bottom-up approach, whereby one estimates demand based on equipment saturations, efficiencies and usage.

A simple method is to look around and draw conclusions. As per data for 2014 published by the International Energy Agency, average global per capita electricity consumption is 3030 kWh (kWh is colloquially known as a unit). The corresponding figure for India is about 805 units, and for developed countries of the OECD, it is 8,028. A majority of the OECD countries are in the temperate climate zone. Therefore, let us examine the scene around India: the corre-

ponding figure for Singapore is 8,844, for Malaysia 4,646 and for Thailand 2,566. The projected global average per capita consumption by the middle of the century is 7,500 units. We can use this data to set a target which India can aim at.

Generation & projected need

An emphasis on energy conservation and improvement in energy efficiency of industry and household gadgets will help in reducing electricity consumption, but bringing it down to below 5,000 units per annum to enjoy a standard of living enjoyed by citizens of OECD countries seems difficult. Assuming India's population by the middle of century will be about 1.6 billion and transmission and distribution losses will come down to the lowest technically feasible value of about 7%, India must plan to generate about 8,600 Billion Units (BU) to provide 5,000 units per capita per annum to its citizens.

The cumulative average growth rate of electricity generation in India for the period 2006-07 to 2015-16 was close to 6%. In 2016-17 generation by utilities was 1,242 BU. Data for generation from non-utilities is not yet available, but one can assume it to be around the same as in 2015-16, i.e. 168 BU. The total



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generation was thus 1,410 BU. Assuming a population of 1.3 billion, it translates to a per capita generation of 1,100 units. Thus, electricity generation projected for 2050 is six times the total generation in 2016-17 and in terms of per capita generation, it is about 4.5 times. India has a long way to go.

The target of per capita availability of 5,000 units per annum is very modest because of several reasons. The percentage share of electricity in total energy consumption is increasing. As per estimates by the International Atomic Energy Agency, this share was 34.8% in 2015 for Middle East and South Asia, and is projected to increase to 52% in 2050. The Government of India has announced policy initiatives such as electricity and housing for all, accelerated infrastructure development, Make in India, electrification of transport, etc. which call for more electricity and on a reliable basis.

Many have opined that we should return to a frugal way of living and consume less electricity. Can one expect the young in India to do that when electricity consumption is continuously rising elsewhere in the world? Aspirational India has a desire to work and live in air-conditioned spaces, reduce the drudgery of home work by using electrical appliances, entertain itself by deploying the best theatre system, commute in comfort in non-polluting transport and so on. Once basic amenities are available, an ordinary Indian will become an aspirational Indian.

Human lives have become more productive because of electrical lighting and indoor climate control. Indoor heating for climate control increased productivity in countries in colder regions of the world and air-conditioning is doing that now in tropical countries, including India.

Using alternative sources

Given this backdrop, we must maximise the use of low-carbon energy sources, i.e. hydropower, variable renewable energy (VRE), and nuclear power. Last year hydroelectricity generation was 122 BU; exploiting the additional potential will take time.

A NITI Aayog report says India's

solar and wind energy potential is greater than 750 GW and 302 GW respectively. Assuming a load factor of 20%, this could generate 1,840 BU. All these numbers are rough estimates, but make it clear that the total possible generation from hydropower and VRE can at best be about a quarter of the projected requirement of 8,600 BU.

Wherefrom will India get the rest of electricity? The share of electricity generated by nuclear power must be ramped up as soon as possible and large investments must be made in research and development in electricity storage technologies to derive full benefit from VRE sources. Until installed capacity based on low-carbon sources picks up, fossil fuels have to continue playing their role. Recent moves such as the Cabinet nod to the construction of 10 indigenous pressurised heavy water reactors, taking further steps for the construction of units 3-6 at Kudankulam, and completing all steps towards operationalisation of the nuclear cooperation agreement with Japan are all steps in the right direction.

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LETTERS TO THE EDITOR

Letters emailed to letters@thehindu.co.in must carry the full postal address and the full name or the name with initials.

Torrential rains

The monsoon fury in Mumbai is reminiscent of the 2005 floods when the city shut down for days and in which hundreds died ("Rain pounds Mumbai to standstill; no relief in sight", Aug. 30). It is natural for everyone to point fingers at the government and the Brihanmumbai Municipal Corporation (BMC) for not being prepared to handle the rains. But nature's fury has no limits — even a well-developed country like the U.S. is facing a crisis with Hurricane Harvey leaving behind a trail of destruction. The uncontrolled growth of Mumbai without proper infrastructure to support the burgeoning population is the reason for this. Desilting is initiated only before the onset of monsoons, and even that is left incomplete because of corruption. The common man adds to this by

dumping trash in the drainage systems. Though more was expected from the concerned officials, one can take solace from the fact that casualties were kept to the minimum thanks to periodic appeals from the BMC and the government.

V. SUBRAMANIAN,
Chennai

The BMC is reputed to be the richest civic body, but when it comes to keeping residents safe from nature's furies, it abdicates its responsibility. Our existing cities must be made fit for human habitation before we start forming "smart cities".

G. DAVID MILTON,
Maruthancode

What Opposition?

Ever since the BJP came to power, Narendra Modi and Amit Shah have changed their narrative from a Congress-free India to an Opposition-free India ("Rallying together", Aug.

30). They seem to have plans for every State that is ruled by non-BJP parties. All the parties that are opposed to the BJP either seem to be joining them or toe their line of thinking. If they don't do this, they are seen as anti-national parties. The Congress must present an alternative agenda to counter the BJP, not just criticise Mr. Modi alone. The party cannot depend on the Gandhis only; it needs to find an acceptable leader outside of the family.

N. NAGARAJAN,
Secunderabad

It has become fashionable for Opposition parties to talk about a *mahagathbandhan* to take on the BJP-led NDA, but this remains a dream. It is strange to expect the Congress, the CPI(M), and the Trinamool Congress to board the same ship as these are the same parties that stand against one

another in West Bengal. People are fed up with such theatrics. We have seen a third front, now we'll see a fourth or fifth front, but the truth is that there is no viable alternative to the BJP.

H.P. MURALI,
Bengaluru

Marital rape exists

The very act of rape is so heinous that there should be no debate on whether or not we must have a law against it ("Centre against making marital rape a crime", Aug. 30). Just because a law could be abused does not mean that there shouldn't be a law. By that logic most laws are abused; does that mean they all shouldn't exist? This is a frivolous excuse to deny women autonomy over their own bodies. The Centre argues that a law against marital rape may destabilise marriage, but what about the fact that marital rape affects a

woman psychologically and could destabilise her mentally? Is such a marriage worth staying in?

SHREYASHI PANJA,
New Delhi

According to Section 375 of the IPC, rape means having sexual intercourse with a woman against her will, or without her consent. I don't understand the exception to this. How is it different if it's by a man who is her husband? How convenient this exception is for a male-dominated society that

otherwise keeps shouting about the empowerment of women. The Centre's silly justification, that if brought under the ambit of crime a marital rape law will be misused, is unpalatable. Advanced civilised societies have no such exceptions in their rape laws as we do; India sadly shares space with backward nations in propagating such a mindset.

BALVINDER,
Chandigarh

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CORRECTIONS & CLARIFICATIONS: >>In "Nasheed flags presence of Chinese warships in Male" (August 30, 2017), there was a reference to *Maldives High Commissioner* to India, Ahmed Mohamed. It should have been *Ambassador of The Maldives*.

>>In "Red, black and Krav Maga", a magazine article (August 27, 2017), a quote on breaking the myth of the weaker sex was erroneously attributed to Mr. *Ajay Patel*. Actually it was *Satyabrat Singh*, a Red Brigade volunteer, who said that.

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Rainbow of possibilities

The privacy judgment can be used to push for queer rights in spaces beyond the scrapping of Section 377



DANISH SHEIKH

In the week following the Supreme Court's *Justice K.S. Puttaswamy (Retd) v. Union of India* decision, popularly referred to as the Right to Privacy judgment, a number of odes have been written to this momentous affirmation of core constitutional principles. Much has been made about the way in which the judgment demolishes the underlying assumptions of *Suresh Kumar Koushal v. Naz Foundation* (2013), which upheld the constitutional validity of Section 377 of the Indian Penal Code. These elements of the ruling will certainly strengthen the case for the Constitution Bench that is scheduled to sit and decide on the *Koushal* case. But regardless of when it is heard by the court, the Right to Privacy judgment is a victory for queer persons as well: in terms of how it challenges the language of that prior decision, and further, in how it opens out the realm of possibilities for queer rights under the law.

The Koushal shock

Looking first at the question of language: Section 377 is a vaguely worded law. The vagueness is purposeful – as Thomas Babington Macaulay once noted, the drafters of the Indian Penal Code were unwilling to insert anything into the text of the statute to promote discussion on “this revolting subject”. The subject in question was, of course, same-sex intimacy. The stated offence, as it has stood for more than 150 years, is “carnal intercourse against the order of nature”. Even as these words crystallise and sanction acts of homophobia and transphobia, they are, ultimately, vague.

The *Koushal* decision, however, was a lot less vague in its contempt for members of the LGBT community. To unambiguously say that the rights of LGBT persons are not real constitutional rights, to brush aside the numerous evidence of violations placed before the court in favour of the merely “200 reported prosecutions over 150 years”: these were violent words. They hit with a greater force because of the space where they came from. The Supreme Court is the highest constitutional



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court of the country, an institution which is held in relative regard to the other branches of government despite its missteps. To hear these words from this court was the clearest rejection of equal citizenship that the queer community had faced.

Koushal was indeed met with overwhelming critique, from civil society as well as from representatives of a range of political parties. However, at the level of constitutional discourse, the slights it had made stood largely unanswered. A different bench of the court made a partial corrective in 2014. The *National Legal Services Authority v. Union of India* judgment, while articulating a charter of rights for transgender individuals, also noted that Section 377, though associated with certain sexual acts, effectively targeted specific identities: a finding the *Koushal* court refused to make. This implicit critique was a gentle reprimand at best.

Righting a wrong

With the Right to Privacy judgment, the court's response to *Koushal* is anything but gentle. Justice D.Y. Chandrachud's opinion, signed on by three other judges, has a section titled “Discordant notes”, which places *Koushal* next to what the judges officially recognise as its constitutional predecessor: the *ADM Jabalpur v. S.S. Shukla* decision of 1976. The habeas corpus case, as it is also referred to, infamously upheld the denial of basic fundamental rights during the imposition of Emergency and is widely understood to be one of the most shameful passages in

the court's history. To put *Koushal* in the same frame as this decision is to acknowledge the gravity of what it meant to uphold the criminalisation of millions of LGBT persons in India.

Justice Chandrachud then takes on one of the more casually dismissive statements made in *Koushal*, where Justice G.S. Singhvi referred to the “so-called rights” of LGBT persons, emphatically noting that they cannot be construed as “so-called rights” but are real rights founded on sound constitutional doctrine. The *Koushal* judgment is also called out for relegating its constitutional responsibility with the claim that LGBT persons constitute a minuscule fraction of the population. The court reminds us of its own counter-majoritarian role, noting that the guarantee of constitutional rights does not depend upon their exercise being favourably regarded by majoritarian opinion.

If the *Koushal* court's violent words constituted a wound, the *Puttaswamy* court's words are an attempt to heal those very wounds, to try and reverse some of the damage that came from this kind of judicial contempt.

Beyond decriminalisation

At another level, the judges here don't just challenge *Koushal*: they also allow us to imagine possibilities for queer justice beyond the limiting frame of Section 377. Even as the court does not make a holding on the constitutional validity of the section, it does find that sexual orientation is an essential attribute of privacy. The conclusion of Justice Chandrachud's

opinion goes on to hold that privacy includes at its core the preservation of personal intimacies and sexual orientation. Further, the court notes that the right to privacy recognises personal choices governing a way of life, that it is not lost or surrendered merely because an individual is in a public space. Reading these statements together can give us a sense of some of the ways in which the judgment can be used to push for queer rights in spaces beyond decriminalisation and the immediate threat of Section 377.

First, to understand privacy as a recognition of personal choice allows us to think of justice for queer lovers who run away from home and are forced to return, often through the filing of habeas corpus petitions by their families. In many instances, persons who express the intent to leave their family will be challenged by a sitting judge in an open court and remanded to a government shelter home to “rethink” their choice. Proceedings in these kinds of habeas corpus petitions are illustrative of the wide discretion that courts have to interfere with personal decisions that queer persons take regarding with whom and where they want to live: the *Puttaswamy* court offers us a forceful constitutional articulation that could be used to challenge this denial of autonomy.

This articulation of privacy as personal autonomy is also what might be used in dealing with the vast number of medical professionals across the country who insist on treating homosexuality as a disease, in many instances detaining queer persons in clinics and administering treatment against their will.

Finally, a recognition that privacy is linked to autonomy and the navigation of space should allow us to think about the ways in which public spaces can be made safer for people who bear physical markers of gender nonconformity: whether it is public transport or an establishment space, how could this articulation of privacy protect, or provide a remedy when queer individuals are harassed for expressing their identity in a public space?

With the Right to Privacy judgment, it is not just *Suresh Kumar Koushal* but also these varied structures supporting queer persecution that have received a significant challenge.

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Managing embankments

Involving the communities would help minimise the misery in flood-prone areas



NIRMALYA CHOUDHURY

Life had come to a standstill in the Ganga-Brahmaputra floodplains where large tracts of land were reeling under floods. Everywhere there were submerged houses, broken bridges, and wasted railway tracks. The fury of the waters in the Kishanganj and Kathar districts of Bihar had cut off the road and rail services in north Bengal, and consequently Northeast India's connectivity by rail with the rest of India. On such occasions, schools routinely turn into relief centres and schoolchildren are forced to take a “flood vacation”. Access to water and sanitation is difficult. Open defecation is common, and the use of contaminated water leads to a peak in water-borne diseases. Agricultural land is either covered with sand or remains waterlogged.

No 'safe' area in the floodplains

Further accentuating the misery is the failure of embankments – the gold standard for flood protection. An embankment is an uplifted earthen structure constructed along the river channel to artificially reduce the size of the floodplains by constricting floodwaters to a narrow stretch. The land outside the embankment is supposed to be safe from floods. However, embankment breach resulting in flooding the “safe” areas is routine. We need a paradigm shift in the way these embankments are managed. It is important to involve the community that is close to the embankment in its management. Only then can we break the build-and-forget mentality that currently rules the bureaucracy.

Our study of over 100 villages in the Ganga-Brahmaputra floodplains found that villages in these areas are exposed to diverse water-related hazards depending on their location vis-a-vis an embankment. Those located inside the embankment are vulnerable to floods and riverbank erosion, and those outside, in the “safe” areas, are prone to extended periods of inundation. This takes place when the construction of an embankment causes the drainage lines to be blocked, the regulators in the embankments become dysfunctional, or when there is a backflow of the larger river in spate. The people in these “safe” areas suffer from a perennial fear of embankment breach, which is not entirely unfounded. In Bihar in 2008, there was a colossal embankment breach in the Kosi river basin. This year too, in parts of Assam, Bihar and West Bengal breaches have caused flooding. Only in a few cases have newly constructed embankments

been able to protect villages located outside them from floods. Despite this, in flood-prone areas with no embankments, people still articulate the need for embankments.

Till now, embankments have been managed by irrigation or flood-control departments. However, the communities near the embankments are best positioned to take care of them. The responsibility of embankment management could be devolved to the community, while the ownership right resides with the state. But this task of decentralisation will not be easy when society is fractured along the lines of caste, class, and religion. We must remember then that disaster is non-discriminatory and affects all.



RANJEET KUMAR

To incentivise collective action from the community, the state has to create an enabling institutional environment. The community-based organisations (embankment management committees) should be empowered to earn revenue from the embankments through levying tolls (as most embankments are also used as roads), and undertake plantation activities (and sale of the harvest). In areas where villages exist both inside and outside the embankment, their interests conflict. In such cases, efforts could be made to ensure that the former has a greater share of the revenue. This will dissuade them from causing a breach. While the irrigation or flood-control departments might issue tenders for periodic maintenance activity, the committees could act as a partner to partly implement the same, or act as a monitoring agency. Payment to contractors could be conditioned upon a joint inspection by the irrigation department and the embankment management committees.

Promoting decentralised management systems is yet to be tested for embankment management, even as participatory irrigation and joint forest management are established practices. But if the past teaches us something, it is that build-and-forget cannot be an option for embankments. If we have to shift from reactive flood protection to year-round flood governance, we must design ways of embankment management in flood-prone areas. Participatory embankment management could be the way forward.

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Why go to school?

Economic freedom has a substantial positive impact on building up human capital

PRASHANTH PERUMAL J.



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Governments are too often urged to actively promote formal school and college education among citizens. Many even go on to say that it is the basic duty of the government to make sure every child is given quality education at least until a certain age, and parents should be held accountable for it.

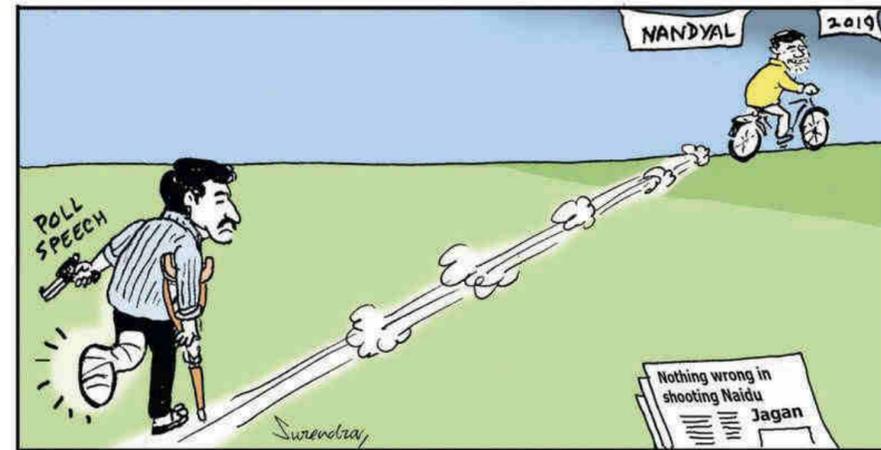
If not, several experts argue, the fruits of education may never reach a vast majority of the population who are ignorant of its immense economic benefits.

“Economic Freedom and Human Capital Investment,” a 2017 paper by Horst Feldmann published in the *Journal of Institutional Economics*, however, offers an alternative view of how education works. Feldmann argues that education is no different from any other investment that seamlessly occurs whenever people are given the economic freedom to fully enjoy its benefits. There might then be very little need for a government to actively promote education among citizens, as they are likely to invest in it anyway. After all, when the right conditions exist, investment in education should happen just as a matter of course. In fact, Feldmann argues, this is very similar to how investment in physical capital works.

Return on education

A factory, for instance, gets built whenever taxes are not too high and laws not too burdensome to discourage investors. Low taxes and stable property rights encourage investors to invest in risky ventures without any unreasonable fear about the future. Similarly, the author argues, people will invest in education whenever they are granted the economic freedom to fully enjoy its benefits. Again, this is for the obvious reason that the return on education increases as the level of economic freedom rises. When people, thanks to lower tax rates, are allowed to retain most of the higher income that they gain from each incremental level of education, it makes eminent sense to invest in education. On the other hand, when the government decides to tax the higher incomes of educated individuals at even higher rates, it makes very little sense to invest in educating oneself further. The same incentives apply to parents who decide on whether to invest in their children's education.

Feldmann in his study uses data on enrolment in secondary education in a total of 109 countries over four decades as a proxy to measure the effect of economic freedom, as measured by the “Economic Freedom of the World” index, on capital investment. He finds that economic freedom indeed has a substantial positive impact on building up human capital. Meanwhile, poverty is quite often cited to invalidate this argument. Many poor families, after all, cannot afford to invest in education. On this point, the author argues that poor families will find it far easier to access capital markets when there is greater economic freedom. Investors looking for profits are more likely to invest in funding a poor child's education when their returns on such investment are enhanced by economic freedom.



CONCEPTUAL Sagan effect SCIENCE

This is a hypothesis which states that the popularity of a scientist among the general public is inversely proportional to his scientific accomplishment. That is, a scientist who spends too much effort making science popular among the masses is believed to be one whose scientific work is not the best. The Sagan effect is named after American astronomer Carl Sagan who popularised science among Americans through the famous 1980 science television series *Cosmos*. Sagan, a prolific scientist with several scientific papers to his name, suffered various professional setbacks because fellow scientists thought a science populariser cannot be a serious scientist.

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FAQ

The threat of nuclear war

Understanding the crisis in the Korean Peninsula

SATTWICK BARMAN

Why has North Korea ramped up its missile tests?

North Korea on Tuesday launched its 22nd missile this year, the most it has fired since it started building its own projectiles in 1984. Like it did in 2009 with Barack Obama, who also had to deal with a North Korean missile fired over Japanese territory (in addition to a nuclear test), Pyongyang seems to be testing U.S. President Donald Trump. This is also a way of driving a wedge into the U.S.'s alliances with Japan and South Korea. Some commentators have raised questions about Washington's commitment to use all available means, including nuclear weapons, if the North attacks, especially since Pyongyang now possibly possesses the means to hit mainland U.S.

Which missile did it fire on Tuesday? It was an intermediate-range ballistic

missile called the Hwasong-12, which flew over the Japanese island of Hokkaido and splashed into the Pacific. The projectile travelled 2,700 km, just short of the distance it needs to reach the U.S. territory of Guam. Unlike the previous two missiles that flew over Japan, this was the Democratic People's Republic of Korea's first overflight of Japan using a ballistic missile. The missile, which has a 75% failure rate, could have very well crashed into a populated area, causing unimaginable devastation.

Can Pyongyang hit mainland U.S.?

In July, it tested an intercontinental ballistic missile (ICBM) called the Hwasong-14 twice. According to the U.S. government, the missile has a range of 7,000-9,500 km and can reach continental U.S. Depending on the trajectory and payload, it can destroy Chicago and maybe even New York.

Is the threat of nuclear war real? According to recent U.S. intelligence assessment, Pyongyang has developed miniaturised nuclear warheads that can fit into its missiles. This coupled with the worrying shift in missile testing patterns under Kim Jong-un – launches are now being conducted all over the country and not just at the conventional test site in Wonsan – indicates that North Korea is possibly preparing all its missile units for nuclear war.

What are the chances of an immediate conflict?

Mr. Trump has already said that “all options are on the table”, while Tuesday's launch has given a fillip to Japanese PM Shinzo Abe's efforts to move the country away from pacifism and strengthen the military. However, the fact that Mr. Kim lobbed the missile over Japan and did not direct it towards Guam shows that he does not want an all-out confrontation yet.

FROM The Hindu ARCHIVES

FIFTY YEARS AGO AUGUST 31, 1967

Bank control legislation being considered

Government is understood to be considering comprehensive amending legislation both in respect of banks and general insurance to secure the benefits of socialisation. The Bills are expected to be introduced in the winter session of Parliament. The Reserve Bank, Banking Regulation and the Insurance Acts will be amended, it is learnt. The Deputy Prime Minister, Mr. Morarji Desai, to-day [August 30, New Delhi] received the final report on social control of banks from Dr.N.V. Panandikar, the officer who had been assigned for this purpose.

A HUNDRED YEARS AGO AUGUST 31, 1917

Congress Presidency. Mrs. Besant Elected.

The meeting of the Congress Reception Committee took place this evening [in Calcutta on August 30], some 250 to 300 members attending. Rai Boikantanath Sen presided. Onsome questions arising regarding the minutes of the previous meeting, Babu H. N. Dutt made a statement which was not supported by Babu S.N. Bannerjee. The former retorted that a man of any honesty would support him. The chairman called on the speaker to withdraw the remark whereupon Mr. Dutt, amid much applause, refused. The Chairman thereupon declared the meeting dissolved and left with some hundred members, including Messrs. Surendranath Bannerjee, D.P. Sarvadhikari, Nilratan Sircar, the Hon'ble Mr. S.N. Roy and the Hon'ble Mr. P.C. Mitter.

DATA POINT

Misogyny in power

Among 1,561 active MPs and MLAs whose affidavits were analysed by ADR, 51 have declared cases related to crimes against women. Here is a State-wise and party-wise break-up of the legislators who have declared such cases

Party	MP/MLAs	State	MP/MLAs
BJP	14	Maharashtra	12
Shiv Sena	7	West Bengal	11
Trinamool Congress	6	Odisha	6
Congress	5	Andhra Pradesh	5
Telugu Desam Party	5	Jharkhand	3
Biju Janata Dal	4	Uttarakhand	3
Independent	3	Gujarat	2
Jharkhand Mukti Morcha	2	Madhya Pradesh	2
Rashtriya Janata Dal	2	Bihar	2
DMK	2	Tamil Nadu	2
CPI(M)	1	Karnataka	1
		Uttar Pradesh	1
		Kerala	1